Listing of the Claims:

1. (Previously presented) A method for illuminating an object, comprising:

determining a nominal illumination angle for the object; and

positioning a light source at an angle complementary to the nominal illumination angle of the object.

2. (Original) A method as in claim 1 wherein the nominal illumination angle is empirically determined.

3. (Original) A method as in claim 1 wherein the nominal illumination angle is mathematically determined.

4. (Original) A method as in claim 1 wherein the light source is positioned to subtend less than the entire object.

5. (Currently amended) A light source for a manufacturing inspection system, the light source for illuminating an object, wherein the object has a nontrivial bi-directional reflectance distribution function and includes a nominal illumination angle, comprising:

a plurality of discrete light sources arranged in two dimensions and positioned at an angle complementary to the nominal illumination angle.

6. (Original) A light source as in claim 5 wherein the discrete light sources are LEDs.

7. (Previously presented) A light source as in claim 6 wherein the LEDs are mounted to a flexible printed circuit board, and the circuit board is in the shape

of a cone such that the cone is symmetrically positioned about a line perpendicular to a surface of the object.

8. (Original) A light source as in claim 6 wherein the LEDs are mounted to at least two rigid circuit boards, the circuit boards being symmetrically positioned around the object at an angle complementary to the nominal angle.

9. (Previously presented) A device for inspecting semiconductor devices having a nontrivial bi-directional reflectance distribution function, the device including a sensing element and a lens arrangement, the improvement comprising:

a two dimensional light source positioned at an angle complementary to a nominal illumination angle of a semiconductor device.

10. (Original) A device as in claim 9 wherein the light source is a two dimensional collection of LEDs.

11. (Original) A device as in claim 10 wherein the collection of LEDs is arranged as a cone.

12. (Previously presented) The method as in claim 1, further comprising:

positioning a detecting lens arrangement along a line perpendicular to a surface of the object.

13. (Previously presented) The light source as in claim 5 wherein the plurality of discrete light sources are positioned symmetrically about a line perpendicular to a surface of the object; and wherein a lens arrangement is located symmetrically about the line on a side of the plurality of discrete light sources opposite the surface.

14. (Previously presented) The device as in claim 9 wherein the lens arrangement is positioned symmetrically about a line perpendicular to a surface of the semiconductor device.

15. (New) The method as in claim 1 wherein the light source is a plurality of discrete light devices and wherein positioning the light source at the angle complementary to the nominal illumination angle of the object further comprises positioning each of the plurality of discrete light devices at the angle complementary to the nominal illumination angle.

16. (New) The method as in claim 1 wherein determining a nominal illumination angle for the object further comprises measuring an angle from a plane normal to the object.